CONTENTS OF VOLUME 27

NUMBER 1

D. E. Kellstein, R. T. Malseed, M. H. Ossipov and F. J. Goldstein	Effect of chronic treatment with tricyclic antidepressants upon antinociception induced by intrathecal injection of morphine and monoamines	1
A. Ratka, H. D. Veldhuis and E. R. De Kloet	Corticosteroid effects on morphine-induced antinociception as a function of two types of corticosteroid receptors in brain	15
H. Sershen, P. Berger, A. E. Jacobson, K. C. Rice and M. E. A. Reith	Metaphit prevents locomotor activation induced by various psychostimulants and interferes with the dopaminergic system in mice	23
Karla Drescher and L. Hetey	Influence of antipsychotics and serotonin antagonists on presynaptic receptors modulating the release of serotonin in synaptosomes of the nucleus accumbens of rats	31
R. Maureen Murphy and F. P. Zemlan	Selective 5-HT_{1B} agonists identify the 5-HT autoreceptor in lumbar spinal cord of rat	37
C. Moret and M. Briley	Sensitivity of the response of 5-HT autoreceptors to drugs modifying synaptic availability of 5-HT	43
Judith M. B. Pinto and T. J. Maher	Administration of aspartame potentiates pentylenetetrazole- and fluorothyl-induced seizures in mice	51
Fatiha Zinebi, L. Fagni and M. Hugon	The influence of helium pressure on the reduction induced in field potentials by various amino acids and on the GABA-mediated inhibition in the CA1 region of hippocampal slices in the rat	57
S. Okuyama and H. Aihara	Action of nootropic drugs on transcallosal responses in rats	67
A. Kazandjian, C. Spyraki, Z. Papadopoulou, A. Sfikakis and D. D. Varonos	Behavioural and biochemical effects of haloperidol during the oestrous cycle of the rat	73
P. E. Rafuse, P. A. Smith and R. J. Walker	Orthovanadate inhibits adrenaline-induced hyperpolarization in amphibian sympathetic ganglia	79
C. Florio, U. Traversa, R. Vertua and P. Puppini	5′-*N*-Ethylcarboxamido[8-^{3}H]adenosine binds to two different adenosine receptors in membranes from the cerebral cortex of the rat	85
F. Gusovsky and J. W. Daly	Formation of inositol phosphates in synaptoneurosomes of guinea pig brain: stimulatory effects of receptor agonists, sodium channel agents and sodium and calcium ionophores	95
Corrigendum		I

NUMBER 2

D. A. Kharkevich	*In memoriam*: V. V. Zakusov	107
J.-S. Lin, K. Sakai and M. Jouvet	Evidence for histaminergic arousal mechanisms in the hypothalamus of cat	111
T. Yamamoto, M. Ohno, K. Takao and S. Ueki	Anti-serotonin action in combination with noradrenaline-stimulating action is important for inhibiting muricide in midbrain raphe-lesioned rats	123
S. Feldman, N. Conforti and E. Melamed	Involvement of ventral noradrenergic bundle in corticosterone secretion following neural stimuli	129
T. Hori, M. Shibata, T. Kiyohara, T. Nakashima and A. Asami	Responses of anterior hypothalamic-preoptic thermosensitive neurons to locally applied capsaicin	135
M. Shibata, T. Hori, T. Kiyohara, T. Nakashima and T. Asami	Responses of anterior hypothalamic-preoptic thermosensitive neurons to substance P and capsaicin	143

R. G. Pertwee, D. Hedley, A. S. M. McQueen and S. M. Gentleman	The hypothermic response of mice to delta-9-tetrahydrocannabinol is enhanced by chlorpromazine, thioxanthenes, alpha-adrenoceptor antagonists and pentolinium but not by SCH 23390 or sulpiride	149
S. H. H. Chan and A. M. Y. Lin	Correlated effects of guanabenz on single-neuron activity in the nucleus reticularis gigantocellularis, systemic arterial pressure and heart rate in the rat	157
W. Friedl, J. Hebebrand, S. Rabe and P. Propping	Phylogenetic conservation of the benzodiazepine binding sites: pharmacological evidence	163
R. T. Joffe, R. M. Post, F. Sulser and Susan R. B. Weiss	Effects of thyroid alterations and carbamazepine on cortical beta-adrenergic receptors in the rat	171
W. A. Banks, A. J. Kastin and B. J. Nager	Analgesia and the blood–brain barrier transport system for TYR-MIF-1/enkephalins: evidence for a dissociation	175
J. P. Grierson, M. D. James, J. R. Pearson and C. A. Wilson	The effect of selective D_1 and D_2 dopaminergic agents on sexual receptivity in the female rat	181
C. W. Loomis, B. Milne and F. W. Cervenko	A study of the interaction between clonidine and morphine on analgesia and blood pressure during continuous intrathecal infusion in the rat	191
N. De Gori, F. Froio, M. C. Strongoli, A. De Francesco, M. Calò and G. Nisticò	Behavioural and electrocortical changes induced by paraquat after injection in specific areas of the brain of the rat	201
Preliminary Notes		
G. L. Holmes and J. L. Thompson	Effects of serial administration of kainic acid on the developing brain	209
A. Waterman, A. Livingston and O. Bouchenafa	Analgesic effects of intrathecally-applied α_2-adrenoceptor agonists in conscious, unrestrained sheep	213

NUMBER 3

R. S. Aronstam, D. C. Marshall and J. J. Buccafusco	Cholinergic false transmitters: physiological and biochemical actions in central and peripheral systems	217
J. J. Buccafusco and R. S. Aronstam	Precursors of cholinergic false transmitters: central effects on blood pressure and direct interactions with cholinergic receptors	227
C. Reavill, P. Jenner, R. Kumar and I. P. Stolerman	High affinity binding of [^{3}H] (−)-nicotine to rat brain membranes and its inhibition by analogues of nicotine	235
H. C. Lim, O. K. Chong and S. H. H. Chan	Characterization of α-adrenoceptors in the nucleus reticularis gigantocellularis involved in the cardiovascular depressant effects of guanabenz in the rat	243
Th. de Boer, C. L. E. Broekkamp, A. Gower, J. S. de Graaf, C. J. de Vos, D. Rae and A. M. L. Van Delft	The pharmacological profile of Org 6906, a potential non-sedative antidepressant that combines monoamine uptake inhibition with alpha$_2$-adrenolytic activity	251
A. C. Swann	Norepinephrine and (Na^+, K^+)-ATPase: evidence for stabilization by lithium or imipramine	261
Jean-Marie Warter, Marguerite Vergnes, Antoine Depaulis, Christine Tranchant, L. Rumbach, G. Micheletti and C. Marescaux	Effects of drugs affecting dopaminergic neurotransmission in rats with spontaneous *petit mal*-like seizures	269
N. E. Goeders, Mary C. Ritz and M. J. Kuhar	Buspirone enhances benzodiazepine receptor binding *in vivo*	275
L. Decsi and Julia Nagy	Independent GABAergic and cholinergic modulation of apomorphine-induced stereotyped rearing in the rat	281
F. S. Abbott and A. A. Acheampong	Quantitative structure–anticonvulsant activity relationships of valproic acid, related carboxylic acids and tetrazoles	287

Elisabeth Hansson and L. Rönnbäck	Interaction between catecholamines and vasoactive intestinal peptide in cultured astrocytes	295
H. C. Neijt, I. J. te Duits and H. P. M. Vijverberg	Pharmacological characterization of serotonin 5-HT_3 receptor-mediated electrical response in cultured mouse neuroblastoma cells	301
M. Abe, T. Tokunaga, K. Yamada and T. Furukawa	γ-Aminobutyric acid and taurine antagonize the central effects of angiotensin II and renin on the intake of water and salt, and on blood pressure in rats	309
B. A. Gosnell	Involvement of μ opioid receptors in the amygdala in the control of feeding	319
Preliminary Notes		
N. Ono, R. Saito, T. Abiru, Y. Matsushita and H. Kamiya	Effect of aspirin on haloperidol-induced cataleptic behavior in mice	327
Janet A. Clark and G. W. Pasternak	U50,488: A kappa-selective agent with poor affinity for mu_1 opiate binding sites	331
A. B. Norman, S. F. Calderon, M. Giordano and P. R. Sanberg	Striatal tissue transplants attenuate apomorphine-induced rotational behavior in rats with unilateral kainic acid lesions	333
Announcement		I

NUMBER 4

J. R. Naranjo, B. C. Wise, B. Mellstrom and E. Costa	Negative feedback regulation of the content of proenkephalin mRNA in chromaffin cell cultures	337
M. Yeadon and I. Kitchen	Comparative binding of μ and δ selective ligands in whole brain and pons/medulla homogenates from rat: affinity profiles of fentanyl derivatives	345
Phyllis E. Mann, G. W. Pasternak, E. F. Hahn, Geneveive Curreri, E. Lubin and R. J. Bodnar	Comparison of effects of chronic administration of naloxone and naloxonazine upon food intake and maintainance of body weight in rats	349
K. R. Gogas and L. B. Hough	Effects of zolantidine a brain-penetrating H_2-receptor antagonist, on naloxone-sensitive and naloxone-resistant analgesia	357
R. W. Horton, R. A. LeFeuvre, N. J. Rothwell and M. J. Stock	Opposing effects of activation of central $GABA_A$ and $GABA_B$ receptors on brown fat thermogenesis in the rat	363
M. C. Heit and W. S. Schwark	Pharmacological studies with a GABA uptake inhibitor in rats with kindled seizures in the amygdala	367
S. P. Butcher, I. Jacobson and A. Hamberger	On the epileptogenic effects of kainic acid and dihydrokainic acid in the dentate gyrus of the rat	375
H. J. Little, R. Gale, N. Sellars, D. J. Nutt and S. C. Taylor	Chronic benzodiazepine treatment increases the effects of the inverse agonist FG7142	383
Michelle Mynlieff and T. V. Dunwiddie	Noradrenergic depression of synaptic responses in hippocampus of rat: evidence for mediation by $alpha_1$-receptors	391
Th. de Boer, G. Maura, M. Raiteri, C. J. de Vos, J. Wieringa and R. M. Pinder	Neurochemical and autonomic pharmacological profiles of the 6-aza-analogue of mianserin, Org 3770 and its enantiomers	399
E. N. Sokomba, P. N. Patsalos, Y. I. Lolin and G. Curzon	Concurrent monitoring of central carbamazepine and transmitter amine metabolism and motor activity in individual unrestrained rats using repetitive withdrawal of cerebrospinal fluid	409
R. Dawson Jr, S. Nagamhama and S. Oparil	Central serotonergic alterations in deoxycorticosterone acetate/NaCl (DOCA/NaCl)-induced hypertension	417
S. Itoh, A. Takashima and G. Katsuura	Effect of cholecystokinin tetrapeptide amide on the metabolism of 5-hydroxytryptamine in the rat brain	427
M. Bansinath and H. N. Bhargava	Evidence for a peripheral action of thyrotropin releasing hormone on gastrointestinal transit in mice	433

Preliminary Notes

J. D. Winkler, Kathleen Callison, S. A. Cass and B. Weiss — Selective down-regulation of D_1 dopamine mediated rotational behavior in supersensitive mice 439

B. Suranyi-Cadotte, F. Lafaille, M. Dongier, M. Dumas and R. Quirion — Decreased density of peripheral benzodiazepine binding sites of platelets of currently drinking, but not abstinent alcoholics 443

D. L. Cameron and A. D. Crocker — Stimulation of D-1 dopamine receptors facilitates D-2 dopamine receptor recovery after irreversible receptor blockade 447

Announcement I

NUMBER 5

A. Vezzani, H. Q. Wu, M. A. Stasi, P. Angelico and R. Samanin — Effect of various calcium channel blockers on three different models of limbic seizures in rats 451

G. M. Nicholson, I. Spence and G. A. R. Johnston — Differing actions of convulsant and nonconvulsant barbiturates: an electrophysiological study in the isolated spinal cord of the rat 459

J. Dingemanse, P. H. Hutson, M. W. E. Langemeijer, G. Curzon and M. Danhof — Application of serial sampling of cerebrospinal fluid in pharmacodynamic studies with a drug active in the CNS: heptabarbital concentrations at onset and offset of loss of righting reflex in rats 467

Christine N. Hinko, A. M. Crider and J. D. Wood — A comparison of prodrug esters of nipecotic acid 475

R. G. Pertwee and S. G. Greentree — Delta-9-tetrahydrocannabinol-induced catalepsy in mice is enhanced by pretreatment with flurazepam or chlordiazepoxide 485

Linda M. Pullan — Receptor specific inhibition of *N*-methyl-D-aspartate stimulated ^{22}Na flux from rat hippocampal slices by phencyclidine and other drugs 493

A. Groppetti, P. C. Braga, G. Biella, M. Parenti, L. Rusconi and P. Mantegazza — Effect of aspirin on serotonin and met-enkephalin in brain: correlation with the antinociceptive activity of the drug 499

S. J. Taylor, M. J. Bartlett and S. A. Greenfield — Release of acetylcholinesterase within the guinea-pig substantia nigra: effects of 5-hydroxytryptamine and amphetamine 507

R. W. Invernizzi, L. Cervo and R. Samanin — 8-Hydroxy-2-(di-*N*-propylamino) tetralin, a selective serotonin$_{1A}$ receptor agonist, blocks haloperidol-induced catalepsy by an action on raphe nuclei medianus and dorsalis 515

M. Hong, E. J. Roots, P. Jenner and C. D. Marsden — The effect of long-term treatment with amine-depleting drugs or chlorpromazine on α-adrenoreceptors and 5-HT_2 receptors in the brain of the rat 519

G. A. Ordway and A. Frazer — Effects of prenalterol on beta adrenergic responsiveness and receptors in the cerebral cortex of the rat 529

S. J. Lewis, Jennifer Svec, M. R. Fennessy and B. Jarrott — Lack of involvement of endogenous μ-receptor opioids in the hypothermic effects of clonidine in normotensive and spontaneously hypertensive rats 537

S. K. Long, R. H. Evans, L. Cull, F. Krijzer and P. Bevan — An *in vitro* mature spinal cord preparation from the rat 541

Preliminary Note

Q. L. G. Harris, S. J. Lewis, A. Shulkes, F. J. E. Vajda and B. Jarrott — Regional brain concentrations of cholecystokinin in the rat: the effects of kindled and non-kindled seizures 547

NUMBER 6

F. Nicoletti, J. T. Wroblewski, E. Fadda and E. Costa — Pertussis toxin inhibits signal transduction at a specific metabolotropic glutamate receptor in primary cultures of cerebellar granule cells 551

P.-W. Gean and Patricia Shinnick-Gallagher — Epileptiform activity induced by magnesium-free solution in slices of rat amygdala: antagonism by *N*-methyl-D-aspartate receptor antagonists 557

J. O. McNamara, R. D. Russell, L. Rigsbee and D. W. Bonhaus	Anticonvulsant and antiepileptogenic actions of MK-801 in the kindling and electroshock models	563
R. C. Boldry and N. J. Uretsky	The importance of dopaminergic neurotransmission in the hypermotility response produced by the administration of *N*-methyl-D-aspartic acid into the nucleus accumbens	569
P. Calabresi, M. Benedetti, N. B. Mercuri and G. Bernardi	Depletion of catecholamines reveals inhibitory effects of bromocryptine and lysuride on neostriatal neurones recorded intracellularly *in vitro*	579
N. Brose, R. D. O'Neill, M. G. Boutelle and Marianne Fillenz	Dopamine in the basal ganglia and benzodiazepine-induced sedation	589
A. N. Nicholson and Peta A. Pascoe	Studies on the modulation of the sleep-wakefulness continuum in man by fluoxetine, a 5-HT uptake inhibitor	597
M. Muramatsu, J. Tamaki-Ohashi, C. Usuki, H. Araki and H. Aihara	Serotonin-2 receptor-mediated regulation of release of acetylcholine by minaprine in cholinergic nerve terminal of hippocampus of rat	603
A. C. Swann and L. O. Hewitt	Hemicholinium-3 binding: correlation with high-affinity choline uptake during changes in cholinergic activity	611
M. G. Cutler and R. W. Horton	Paradoxical enhancement of seizures in the gerbil after chronic treatment with sodium valproate	617
J. D. Leander, R. R. Lawson and D. W. Robertson	Anticonvulsant effects of a novel aminobenzamide (LY201116) in mice	623
T. T. Quach, A.-M. Duchemin, C. Rose and J.-C. Schwartz	[^{3}H]Glycogenolysis in brain slices mediated by β-adrenoceptors: comparison of physiological response and [^{3}H]dihydroalprenolol binding parameters	629
G. W. Hesse, J. N. Jacob and V. E. Shashoua	Uptake in brain and neurophysiological activity of two lipid esters of γ-aminobutyric acid	637
A. Fleischmann and G. Urca	Clip-induced analgesia and immobility in the mouse: pharmacological characterization	641
Preliminary Notes		
J. A. Bell and H. E. Shannon	Partial agonists of the morphine type: facilitative effects on electrophysiologically recorded C-fiber reflexes in the cat	649
W. Danysz, J. T. Wroblewski and E. Costa	Learning impairment in rats by *N*-methyl-D-aspartate receptor antagonists	653
M. Casas, S. Ferré, A. Cobos, J. Cadafalch, J. M. Grau and F. Jané	Comparison between apomorphine and amphetamine-induced rotational behaviour in rats with a unilateral nigrostriatal pathway lesion	657
Corrigendum		I
Announcement		III

NUMBER 7

T. Rothe, Helen Middleton-Price and V. Bigl	The ontogeny of GABA receptors and glutamic acid decarboxylase in regions of the rat brain. Effect of prenatal exposure to diazepam	661
P. L. Wood, Helen S. Kim, D. L. Cheney, Cristina Cosi, M. Marien, T. S. Rao and L. L. Martin	Constant infusion of [$^{13}C_6$]glucose: simultaneous measurement of turnover of GABA and glutamate in defined regions of the brain of individual animals	669
Cristina Suñol, J. M. Tusell, E. Gelpí and E. Rodríguez-Farré	Regional concentrations of GABA, serotonin and noradrenaline in brain at onset of seizures induced by lindane (γ-hexachlorocyclohexane)	677
A. Depaulis, J.-J. Bourguignon, C. Marescaux, M. Vergnes, M. Schmitt, G. Micheletti and J.-M. Warter	Effects of gamma-hydroxybutyrate and gamma-butyrolactone derivatives on spontaneous generalized non-convulsive seizures in the rat	683
G. G. Nomikos and Christina Spyraki	Influence of oestrogen on spontaneous and diazepam-induced exploration of rats in an elevated plus maze	691

G. G. S. Collins and S. J. Howlett	The pharmacology of excitatory transmission in the rat olfactory cortex slice	697
J. S. Sprouse and G. K. Aghajanian	Responses of hippocampal pyramidal cells to putative serotonin 5-HT_{1A} and 5-HT_{1B} agonists: a comparative study with dorsal raphe neurons	707
S. J. Pearson and G. P. Reynolds	Depletion of monoamine transmitters by tetrabenazine in brain tissue in Huntington's disease	717
V. K. Gribkoff, E. P. Christian, J. H. Robinson, S. A. Deadwyler and F. E. Dudek	Cholinergic excitation of supraoptic neurons in hypothalamic slices of rat	721
R. Radomirov and K. Venkova	Pharmacological characteristics of the postsynaptically mediated contractile responses of guinea-pig ileum to long-lasting electrical field stimulation	729
S. A. Turkanis and R. Karler	Changes in neurotransmitter release at a neuromuscular junction of the lobster caused by cannabinoids	737
P. J. Brent, P. A. Johnston and L. A. Chahl	Increased plasma catecholamines and locomotor activity induced by centrally administered substance P in guinea-pigs	743
Maria S. Holzhäuer-Oitzl, R. Hasenöhrl and J. P. Huston	Reinforcing properties of substance P in the region of the nucleus basalis magnocellularis in rats	749
Preliminary Notes		
R. C. Sanders and T. F. Murray	Chronic theophylline exposure increases agonist and antagonist binding to A_1 adenosine receptors in rat brain	757
J. T. Bartrup and T. W. Stone	Presynaptic actions of adenosine are magnesium-dependent	761
J. W. Lazarewicz, J. T. Wroblewski, M. E. Palmer and E. Costa	Activation of *N*-methyl-D-aspartate-sensitive glutamate receptors stimulates arachidonic acid release in primary cultures of cerebellar granule cells	765
W. Koek and J. H. Woods	2-Amino-6-trifluoromethoxy benzothiazole (PK 26124), a proposed antagonist of excitatory amino acid neurotransmission, does not produce phencyclidine-like behavioral effects in pigeons, rats and rhesus monkeys	771

NUMBER 8

A Tribute to B. B. Brodie		i
I. A. Chaudhry, S. A. Turkanis and R. Karler	Characteristics of "reverse tolerance" to amphetamine-induced locomotor stimulation in mice	777
J. M. Barnes, N. M. Barnes, B. Costall, R. J. Naylor and F. D. Tattersall	Reserpine, *para*-chlorophenylalanine and fenfluramine antagonise cisplatin-induced emesis in the ferret	783
E. D. French	Effects of acute and chronic administration of phencyclidine on the A_{10} dopaminergic mesolimbic system: electrophysiological and behavioral correlates	791
P. Bo, E. Ongini, A. Giorgetti and F. Savoldi	Synchronization of the EEG and sedation induced by neuroleptics depend upon blockade of both D_1 and D_2 dopamine receptors	799
O. Hong, G. A. Young and N. Khazan	Modulation of morphine-induced EEG and behavioral effects by dynorphin A-(1-13) in non-tolerant and morphine-tolerant rats	807
Ann G. Hayes and P. J. Birch	Reversal by β-funaltrexamine and 16-methyl cyprenorphine of the antinociceptive effects of opioid agonists in the mouse and guinea-pig	813
A. A. Baumeister, M. F. Hawkins, L. L. Anderson-Moore, T. G. Anticich, T. D. Higgins and P. Griffin	Effects of bilateral injection of GABA into the substantia nigra on spontaneous behavior and measures of analgesia	817
G. K. Matheson, Deanna Gage, G. White, Vanessa Dixon and Debbie Gipson	A comparison of the effects of buspirone and diazepam on plasma corticosterone levels in rat	823
C. M. Brown, A. T. Kilpatrick, A. Martin and M. Spedding	Cerebral ischaemia reduces the density of 5-HT_2 binding sites in the frontal cortex of the gerbil	831

M. C. Kelley, M. K. Raizada and E. M. Meyer — Pharmacological characterization of high affinity choline transporters in primary neuronal cultures in rat brain 837

R. D. Pinnock, D. B. Sattelle, K. A. F. Gration and I. D. Harrow — Actions of potent cholinergic anthelmintics (morantel, pyrantel and levamisole) on an identified insect neurone reveal pharmacological differences between nematode and insect acetylcholine receptors 843

J. Lutes, J. F. Lorden, M. Beales and G. A. Oltmans — Tolerance to the tremorogenic effects of harmaline: evidence for altered olivo-cerebellar function 849

R. H. Lin, W. M. Fu and S. Y. Lin-Shiau — Presynaptic action of uranyl nitrate on the phrenic nerve-diaphragm preparation of the mouse 857

Book Reviews 865

NUMBER 9

L. L. Cook, F. W. Edens and H. A. Tilson — Possible brainstem involvement in the modification of thermoregulatory processes by chlordecone in rats 871

L. L. Cook, F. W. Edens and H. A. Tilson — Pharmacological evaluation of central adrenergic involvement in chlordecone-induced hypothermia 881

P. K. Eide and A. Tjølsen — Effects of serotonin receptor antagonists and agonists on the tail-flick response in mice involve altered tail-skin temperature 889

T. Hori, M. Yamasaki, T. Asami, H. Koga and T. Kiyohara — Responses of anterior hypothalamic–preoptic thermosensitive neurons to thyrotropin releasing hormone and cyclo(His–Pro) 895

I. S. Ebenezer — Can vasopressin alone act as an unconditioned stimulus to produce passive avoidance behaviour in rats in a typical memory experiment? 903

M. Perfumi, C. Polidori, M. Massi and G. de Caro — Neurokinin A selectively inhibits water intake in the rat 909

S. Okuyama and H. Aihara — Effect of minaprine on synaptic transmission in the neocortex of the rat *in vivo* 915

A. Studer, E. Sundström, G. Jonsson and W. Schultz — Acute electrophysiological and neurochemical effects of administration of MPTP in mice 923

L. T. Meltzer and C. L. Christoffersen — Effects of intraperitoneal administration of apomorphine and the isomers of 3-(1-propyl-3-piperidinyl)phenol on the firing activity of substantia nigra dopamine neurons: comparison of agonist efficacies and development of acute tolerance 933

A. Delini-Stula, E. Radeke and H. van Riezen — Enhanced functional responsiveness of the dopaminergic system—the mechanism of anti-immobility effects of antidepressants in the behavioural despair test in the rat 943

D. B. Beleslin and V. Nedelkovski — Emesis induced by 4-(*m*-chlorophenylcarbamoyloxy)-2-butynyltrimethylammonium chloride (McN-A-343): evidence for a predominant central muscarinic M_1 mediation 949

H. H. Suh, L. F. Tseng and C. H. Li — β-Endorphin-(1–27) antagonizes β-endorphin- but not morphine-, D-Pen^2-D-Pen^5-enkephalin- and U50,488H-induced analgesia in mice 957

Janine A. Danks, F. C. Tortella, J. B. Long, V. Bykov, A. E. Jacobson, K. C. Rice, J. W. Holaday and R. B. Rothman — Chronic administration of morphine and naltrexone up-regulate[^{3}H][D-ala^2, D-leu^5]enkephalin binding sites by different mechanisms 965

NUMBER 10

G. Bagdy, K. Szemeredi, J. L. Hill and D. L. Murphy — The serotonin agonist, *m*-chlorophenylpiperazine, markedly increases levels of plasma catecholamines in the conscious rat 975

E. Hård and J. Engel — Effects of 8-OH-DPAT on ultrasonic vocalization and audiogenic immobility reaction in pre-weanling rats 981

I. Hotta and S. Yamawaki — Possible involvement of presynaptic 5-HT autoreceptors in effect of lithium on 5-HT release in hippocampus of rat 987

G. A. Higgins, A. J. Bradbury, B. J. Jones and N. R. Oakley	Behavioural and biochemical consequences following activation of 5-HT_1-like and GABA receptors in the dorsal raphé nucleus of the rat	993
C. Ennis and M. C. W. Minchin	Modulation of the GABA autoreceptor by benzodiazepine receptor ligands	1003
P. Paakkari and G. Feuerstein	Antagonism of dermorphin-induced catalepsy with naloxone, TRH-analog CG3703 and the benzodiazepine antagonist, RO 15-1788	1007
Y. Ohno and J. E. Warnick	Effects of thyrotropin-releasing hormone on phencyclidine- and ketamine-induced spinal depression in neonatal rats	1013
Ellen E. Codd, T. Yellin and R. F. Walker	Binding of growth hormone-releasing hormones and enkephalin-derived growth hormone-releasing peptides to mu and delta opioid receptors in forebrain of rat	1019
M. Ukai, S. Nakayama and T. Kameyama	The opioid antagonist, MR2266, specifically decreases saline intake in the mouse	1027
S. B. Deshpande and J. E. Warnick	Temperature-dependence of reflex transmission in the neonatal rat spinal cord, *in vitro*: influence on strychnine- and bicuculline-sensitive inhibition	1033
M. G. Cutler and A. K. Dixon	Effects of ipsapirone on the behaviour of mice during social encounters	1039
T. Ohgaki, S. Uchida, H. Meguri, K. Ogita and Y. Yoneda	Preventive action of quisqualic acid against grayanotoxin-induced suppression of locomotor activity in mice	1045
A. A. Alhaider and A. A. Mustafa	Interaction of some atypical antidepressants and adrenoceptor antagonists with imipramine: a behavioural study with isoprenaline-induced drinking	1055
Y.-F. Xiao and H. E. Brezenoff	The role of M_2 muscarinic receptors in the posterior hypothalamus in the pressor response to intracerebroventricularly-injected neostigmine	1061
E. Navarro, S. D. Romero and T. L. Yaksh	Release of prostaglandin E_2 from brain of cat: II. *In vivo* studies on the effects of adrenergic, cholinergic and dopaminergic agonists and antagonists	1067
Preliminary Notes		
Catharine Heninger and Dorothy W. Gallager	Altered γ-aminobutyric acid/benzodiazepine interaction after chronic diazepam exposure	1073
R. G. Fariello, O. Ghilardi, A. Peschechera, M. T. Ramacci and L. Angelucci	Regional distribution of ubiquinones and tocopherols in the mouse brain: lowest content of ubiquinols in the substantia nigra	1077
M. E. Corcoran	Characteristics of accelerated kindling after depletion of noradrenaline in adult rats	1081

NUMBER 11

G. Lombardi, M. Beni, A. Consolazione and F. Moroni	Lesioning and recovery of the serotoninergic hippocampal afferents: differential effects of GM_1 ganglioside	1085
M. Johnson, G. R. Hanson and J. W. Gibb	Effects of dopaminergic and serotonergic receptor blockade on neurochemical changes induced by acute administration of methamphetamine and 3,4-methylenedioxymethamphetamine	1089
B. M. Snape and J. A. Engel	Ethanol enhances the calcium-dependent stimulus-induced release of endogenous dopamine from slices of rat striatum and nucleus accumbens *in vitro*	1097
M. T. Bardo, J. L. Neisewander and R. B. Ennis	Chronic treatment with naltrexone enhances morphine-stimulated dopamine neurotransmission: neurochemical and behavioral evidence	1103
F. S. Radhakishun, G. Wolterink and J. M. van Ree	The response of apomorphine administered into the accumbens in rats with bilateral lesions of the nucleus accumbens, induced with 6-hydroxydopamine	1111
C. N. Svendsen, M. Froimowitz, C. Hrbek, A. Campbell, N. Kula, R. J. Baldessarini, B. M. Cohen, S. Babb, M. H. Teicher and E. D. Bird	Receptor affinity, neurochemistry and behavioral characteristics of the enantiomers of thioridazine: evidence for different stereoselectivities at D_1 and D_2 receptors in rat brain	1117

D. J. Sanger and B. Zivkovic	Further behavioural evidence for the selective sedative action of zolpidem	1125
Marjorie Hawkins, W. Pan, P. Stefanovich and M. Radulovacki	Desensitization of adenosine A_2 receptors in the striatum of the rat following chronic treatment with diazepam	1131
J. Manzanares, R. Cantón, C. Grande, J. Benedí and F. Zaragozá	Levels of insulin in the brains of rats modified by chronic administration of amphetamine, haloperidol and sulpiride	1141
S. H. Hanissian and G. A. Tejwani	Histidine abolishes the inhibition by zinc of naloxone binding to opioid receptors in rat brain	1145
D. J. Heal, L. J. Bristow, R. J. De Souza, J. G. Bloomfield, E. M. Hurst and J. M. Elliott	The influence of injection of oestradiol to female rats on changes in α_2- and β-adrenoceptor function induced by repeated administration of desipramine or electroconvulsive shock	1151
A. T. Malouf, E. Swearengen and C. Chavkin	Comparison of the actions of phencyclidine and sigma ligands on CA1 hippocampal pyramidal neurons in the rat	1161
V. M. Abshire, K. D. Hankins, K. E. Roehr and J. A. DiMicco	Injection of L-allylglycine into the posterior hypothalamus in rats causes decreases in local GABA which correlate with increases in heart rate	1171
J. T. Cheng, C. F. Yang and T. C. Jou	Inhibitory effect of *l*-ascorbic acid on the growth of astrocytes in cell culture	1179
Preliminary Notes		
E. Fadda, W. Danysz, J. T. Wroblewski and E. Costa	Glycine and D-serine increase the affinity of *N*-methyl-D-aspartate sensitive glutamate binding sites in rat brain synaptic membranes	1183
J. Bell, Paula C. Bickford-Wimer, René de la Garza, M. Egan and R. Freedman	Increased central noradrenergic activity during benzodiazepine withdrawal: an electrophysiological study	1187
V. H. Sethy, J. W. Francis, R. R. Russell and P. L. Ruppel	Dual effect of *N*-methyl-*N*-(1-methyl-4-pyrolidino)-2-butyl)acetamide on release of (3H)-acetylcholine from the rat hippocampal slices	1191
A. Campbell, R. J. Baldessarini and M. C. Cremens	Dose–catalepsy response to haloperidol in rat: effects of strain and sex	1197
D. T. Manallack and P. M. Beart	Up-regulation of rat cortical σ receptors after subchronic administration of rimcazole and 1,3-di(2-tolyl)guanidine	1201
I. Zimanyi, A. Lajtha, E. S. Vizi, E. Wang and M. E. A. Reith	Evidence that there is no direct correlation between alpha$_2$-adrenoceptor antagonism and inhibition of voltage-dependent sodium channels	1205

NUMBER 12

R. M. A. Golin, E. Gotoh, S. I. Said and W. F. Ganong	Pharmacological evidence that the sympathetic nervous system mediates the increase in renin secretion produced by immobilization and head-up tilt in rats	1209
M. K. Krstić	Pressor response mediated via histamine H_1-receptors of the guinea-pig sympathetic ganglia	1215
S. A. Turkanis, L. M. Partlow and R. Karler	The effects of amphetamine on neuromuscular transmission in the lobster	1221
S. de St Hilaire-Kafi and J.-M. Gaillard	Hypnotic action of flunitrazepam in the rat: does 5-HT mechanism play a role?	1227
A. Gulati and H. N. Bhargava	Cerebral cortical 5-HT$_1$ and 5-HT$_2$ receptors of morphine tolerant-dependent rats	1231
D. J. Heal and S. L. Smith	The effects of acute and repeated administration of T_3 to mice on 5-HT$_1$ and 5-HT$_2$ function in the brain and its influence on the actions of repeated electroconvulsive shock	1239
Joyce Willetts and R. L. Balster	The discriminative stimulus effects of *N*-methyl-D-aspartate antagonists in phencyclidine-trained rats	1249
C. Rouillard and P. J. Bédard	Specific D_1 and D_2 dopamine agonists have synergistic effects in the 6-hydroxydopamine circling model in the rat	1257

R. G. Pertwee, S. G. Greentree and P. A. Swift	Drugs which stimulate or facilitate central GABAergic transmission interact synergistically with delta-9-tetrahydrocannabinol to produce marked catalepsy in mice	1265
P. E. Shreve and N. J. Uretsky	Effect of GABAergic transmission in the subpallidal region on the hypermotility response to the administration of excitatory amino acids and picrotoxin into the nucleus accumbens	1271
R. W. Clarke, T. W. Ford, S. M. Harris and J. S. Taylor	Thyrotropin releasing hormone, cholecystokinin and endogenous opioids in the modulation of spinal reflexes in the rabbit	1279
R. A. Barraco, E. P. Schoener, P. M. Polasek, L. L. Simpson, C. J. Janusz and M. Parizon	Respiratory effects of cyclic AMP following injection into the nucleus tractus solitarius of rats	1285
J. Weidenfeld, Y. Abu-Amer and E. Shohami	Inhibition of prostaglandin synthesis in brain of rat by dexamethasone: lack of effect of dexamethasone phosphate ester and various hormonal steroids	1295
M. D. Saltarelli, J. Lopez, P. R. Lowenstein and J. T. Coyle	The role of calcium in the regulation of [^{3}H]hemicholinium-3 binding sites in rat brain	1301
Preliminary Notes		
M. W. Warenycia and G. M. McKenzie	Excitation of striatal neurons by dexamphetamine is not abolished by either chloral hydrate or urethane anaesthesia	1309
A. Shvaloff, Brigitte Tesolin and C. Sebban	Effects of apomorphine in quantified electroencephalography in the frontal cortex: changes with dose and time	1313
Publisher's Note		I